CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.09/HSN/WMM/Gradation/2013-14

18.11.2013

GRADATION FOR WMM

MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. H.S. Nataraj,** Contractor,Bangalore.

Name of Work : Improvements to Bullet Krishnappa Layout cross road in Ward No.09 Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-TND/150/2013-14 Dated: 09.10.2013

Date of Testing : 18.11.2013

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **9205**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	350	350	3.8	96.2	95-100
22.4	3105	3455	37.5	62.5	60-80
11.2	1650	5105	55.5	44.5	40-60
4.75	1200	6305	68.5	31.5	25-40
2.36	1005	7310	79.4	20.6	15-30
0.600	895	8205	89.1	10.9	8-22
0.075	650	8855	96.2	3.8	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

M/s. Civil-Tech Consultants & Engineers

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Job No.: CTCE/BBMP/W.No.09/HSN/SDBC/Bitumen/2013-14 23.11.2013

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. H.S. Nataraj,** Contractor,Bangalore.
NAME OF THE WORK	Improvements to Bullet Krishnappa Layout cross road in Ward No.09 Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	EE/BTP/BBMP/E-TND/150/2013-14 Dated: 09.10.2013
SAMPLE I/D	Crosss Roads in Bullet Krishnappa Layout in Ward No.09, BBMP, Bangalore.
DATE OF TESTING	23.11.2013

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475	474.5
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25	25.50
7. Bitumen content in %	5.00	5.10
8. Average	**5.05**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	32.36	6.81	6.81	93.19	90-100
4.75	256.3	53.96	60.77	39.23	35-51
2.36	44.36	9.34	70.11	29.89	24-39
1.18	40.22	8.47	78.58	21.42	15-30
0.3	43.26	9.11	87.68	12.32	9-19
0.075	32.36	6.81	94.50	5.50	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	33.36	6.67	6.67	93.33	90-100
4.75	255.6	51.12	57.79	42.21	35-51
2.36	35.26	7.05	64.84	35.16	24-39
1.18	42.32	8.46	73.31	26.69	15-30
0.3	48.25	9.65	82.96	17.04	9-19
0.075	55.25	11.05	94.01	5.99	3-8

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